

Box Butte Reservoir 2005 Fishery Survey Summary

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Map of Box Butte Reservoir

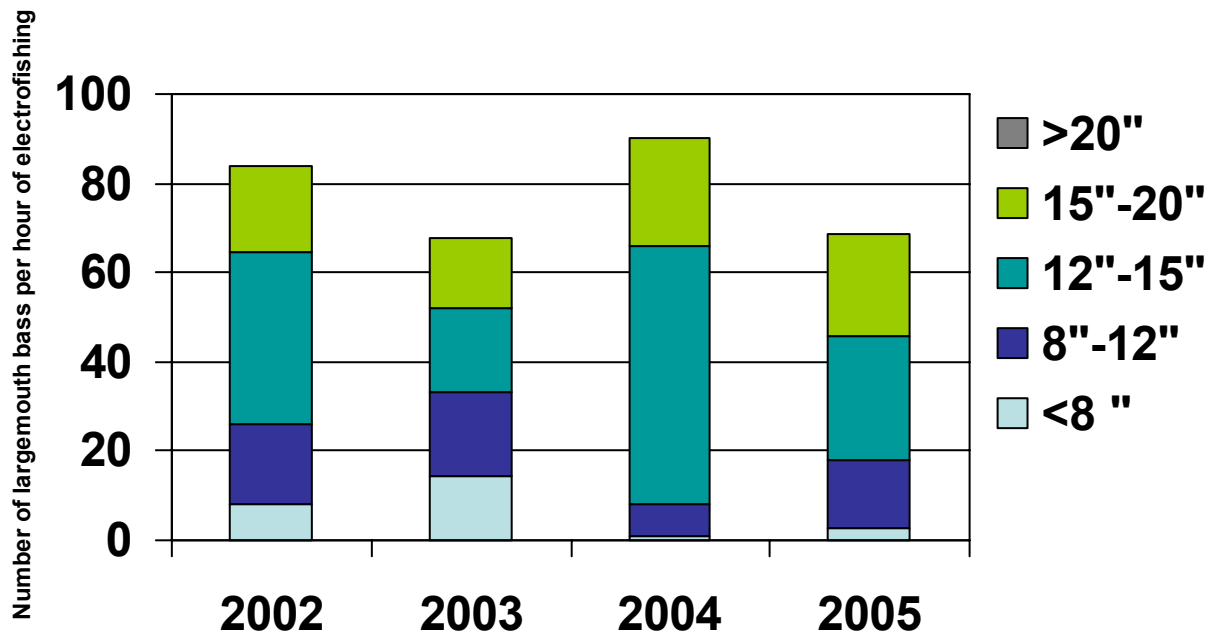
The following text and graphs are the result of fish population surveys completed at Box Butte Reservoir. Fish populations have been sampled at Box Butte Reservoir using frame nets, gill nets, and night-time electrofishing. Night-time electrofishing is the common method Nebraska fishery biologists use to sample largemouth bass. Gill nets are used to sample open water species such as walleye and channel catfish. Frame nets are the most effective gear for sampling shoreline-favoring species such as bluegill and crappie.

The following graphs illustrate the total number of fish caught per hour of electrofishing or per net set and the relative abundance of different lengths of fish caught during our sampling effort. The text provides a short explanation of the information shown in the graphs.

Largemouth Bass

Largemouth bass numbers have remained fairly stable in Box Butte Reservoir during the past four sampling seasons. Largemouth bass size structure remains excellent at Box Butte with eleven different year classes present and 8 and 9 year old bass being the most abundant age class sampled. The average length of bass sampled was a little over 13 inches and 33% of the fish sampled were greater than 15 inches in total length. Owing to a relatively short growing season, bass in Box Butte grow slow. It takes bass at least 9 years of growth to reach 15 inches in Box Butte Reservoir. Despite these slow growth rates, bass anglers should expect good success on fish over 15 inches in 2006, with a good proportion of the population in this size range.

Largemouth Bass Electrofishing Box Butte Reservoir

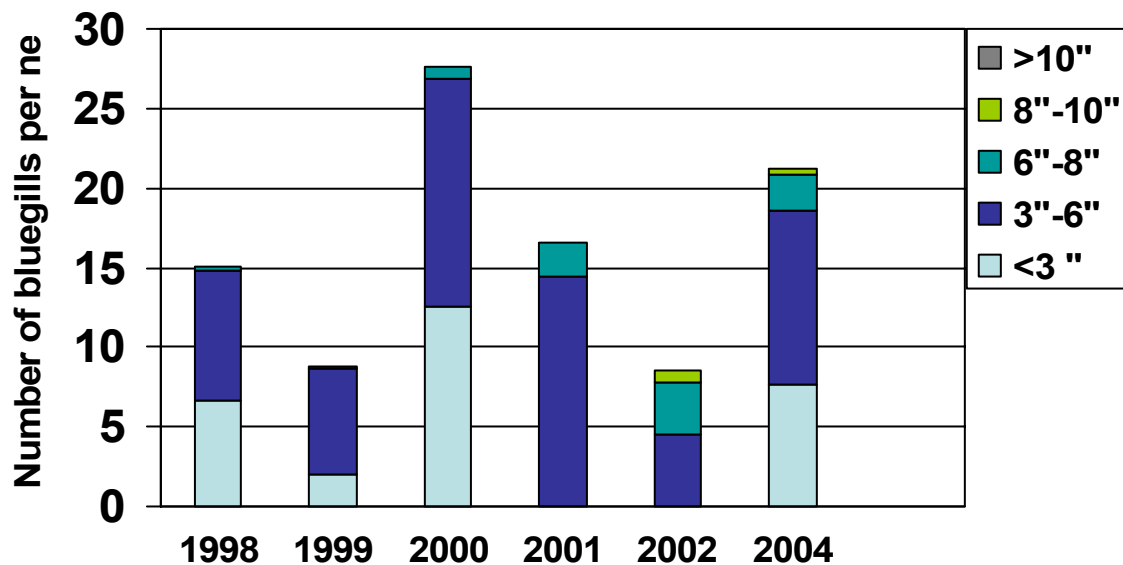


Bluegill

While no bluegill sampling was conducted in 2005, the results from the 2004 sampling effort yielded the second highest frame net catch in several seasons. An angler survey conducted from 2001-2003 found a 63% increase in bluegill angler catch rates since the first angler survey in 2001. The 2003 angler survey also demonstrated that the total catch of bluegills had increased and that the average size of bluegill harvested by anglers was just less than 8 inches. The bluegill population has established several year classes in the past couple of sampling seasons and this is a good sign of a healthy fish population. Good densities and size structure should result in a respectable fishery for the upcoming angling season.

Bluegill Frame Net Catch

Box Butte Reservoir

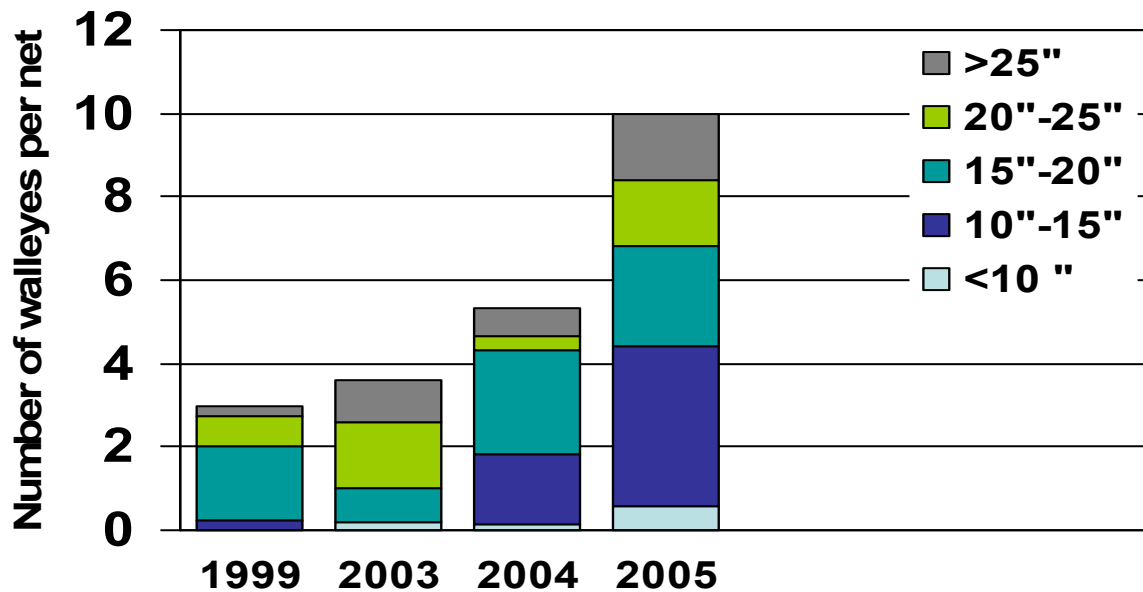


Walleye

In 2005, walleye catch rates continued to improve to 10 fish per gill net, which is the highest catch rate in recent years. Most of the increase was in walleye that were 10 to 15 inches long but numbers of fish over 25 inches more than doubled from the 2004 survey as well. About 56% of the walleye sampled were over 15 inches. The average length of walleye sampled was slightly over 17.5 inches. The largest walleye sampled was 29 inches long. Anglers can probably expect higher catch rates in 2006 and there remains a good chance of hooking a fish over 25 inches at Box Butte Reservoir.

Walleye Gill Net Catch

Box Butte Reservoir

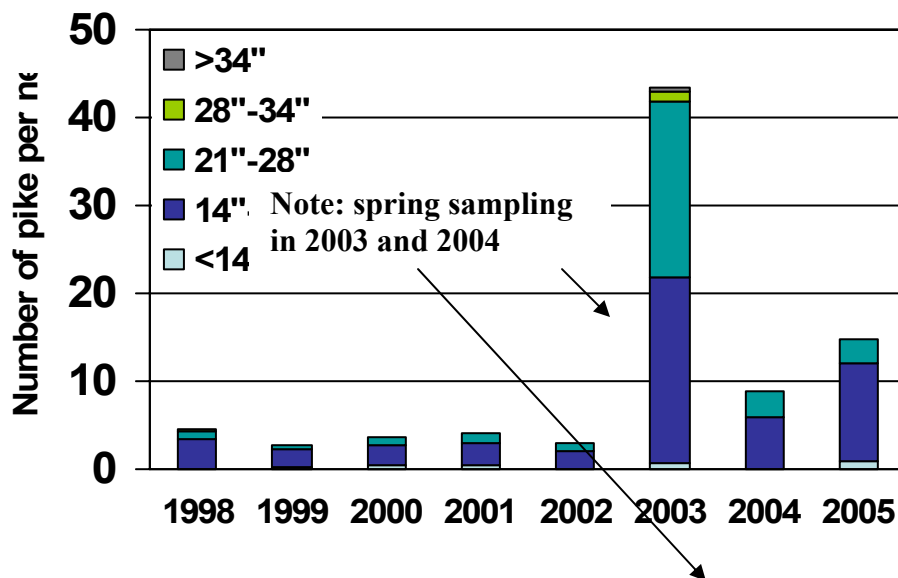


Northern Pike

Fall gill netting at Box Butte yielded higher than average numbers of pike in 2005 with 14.8 per net set when comparing to past gill net data conducted since 1998. The average length of pike was about 19 inches. Conversely, frame net sampling occurred at Box Butte Reservoir in late March, 2004 and 2003 to target specifically Northern Pike and yellow perch. Sampling these species at the end of March during their spawning time allows fishery biologists better insight on the Northern pike population by gathering a larger sample size. Unfortunately, we feel that the 2004 sampling effort was slightly skewed because of a partially missed spawning window. Higher water temperatures and later sampling date in the 2004 survey compared to the 2003 survey may have misrepresented the two year comparison. Northern pike anglers should have another year of high catch rates in 2006. While the majority of the pike fall into the 18"-22" group, a chance at a 30" plus fish can be expected.

Northern Pike Frame Net Catch

Box Butte Reservoir



Yellow Perch

According to our creel survey done on Box Butter Reservoir from 2001-2003, yellow perch catch rates declined steadily. In 2001, anglers caught 6110 perch from Box Butte. By 2003, catch rates were down and fisherman caught just over 2000 yellow perch. Because of this declining trend, 50,000, or 30/acre, advanced fingerling perch were stocked in the lake in September of 2004. We will continue to monitor and assess the yellow perch population with an early frame netting survey starting in the spring of 2006.

For additional information about fisheries management in the panhandle, please contact the NGPC Alliance office at 308-763-2940 or by email at the addresses listed below.

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